

10,426 as compared with 9,094 during the previous year. This is the highest figure yet obtained. Of this number, 7,761 were given a full course of treatment, 1,737 were given advice only as no treatment was considered necessary in their cases, and 823 patients voluntarily abandoned treatment (absconders). The number fully treated exceeds the previous year's corresponding figure by 803 and the number of absconders by 140. The figure of absconders is very high, there is no control over these cases as most of them are non-indigent and come at their own expense for treatment.

Treatment.—The vaccine used for immunization is prepared by Semple's method from sheep's brain with the Paris Fixed Virus. The strength of the emulsion used is 1 per cent and the dose is—

Licks—5 c.c. daily for 7 days.

Bites—5 c.c. daily for 14 days for all classes of cases.

Results of treatment.—The statistical results are based on the health returns of patients 6 months after completion of treatment. The total percentage of these returns for all cases during the year is 67.9 per cent. Great difficulty has been experienced in tracing the patients at the end of the 6 months' period and numerous replies from district and despatching officers have stated that the patient had left the village and his present whereabouts are not known.

There were 57 deaths from hydrophobia during the year. Of these 14 arrived at the institute after the disease had developed and are excluded from the deaths. Of the remaining 43 deaths, 8 developed the disease during treatment and 7 within 15 days of completing treatment and are regarded as 'Non-failures'. The remaining 28 cases developed the disease after 15 days of completion of treatment and are regarded as 'Failures', giving a total death rate of 0.55 per cent and a failure rate of 0.36 per cent for the year.

There were no deaths among the 254 European cases treated during the year.

Decentralization of treatment.—It has not been possible to issue vaccine to treatment centres owing to the limited accommodation available for the work of this institute. The bottling of vaccine in ampules, which is the only safe method of issuing vaccine to out-stations and treatment centres, cannot be undertaken at present for want of proper accommodation. A scheme for the reorganization of the institute and the provision of more accommodation so as to start a bottling section has been submitted to government and should it be accepted, the bottling section will be opened and the vaccine issued to treatment centres. This will relieve the present congestion which exists besides greatly reducing the total cost of the upkeep of the institute.

Correspondence

MODI'S MEDICAL JURISPRUDENCE

To the Editor, THE INDIAN MEDICAL GAZETTE

SIR,—With reference to the review of his book which appears in the June number of the *Gazette*, Dr. Modi has made the following comments:—

'The tables re. the ages at which the epiphyses of long bones unite, etc., were adopted by the author in consultation with the Professor of Anatomy of the King George's Medical College, Lucknow, and the Radiologist, King George's Hospital, Lucknow, whose investigations do not concur with those of Dr. Galstaun. They were aware of his article in the *Indian Medical Gazette*.'

Re. the remarks of the reviewer about the treatment of arsenic poisoning by sodium thiosulphate his attention is invited to the following paragraph on p. 681 of the book under review:

'George W. Lawson, W. P. Jackson and George S. Cattanaach recommend the intravenous injection of $7\frac{1}{2}$ grains of sodium thiosulphate in 10 per cent solution. They tried it in 28 cases of poisoning by arsenic after the stomach was washed out with warm water. Of these 15 recovered and 13 died from 6 hours to 3 days'.

Yours, etc.,

BUTTERWORTH & CO. (INDIA), LTD.

CALCUTTA,
4th July, 1933.

VACCINATION AGAINST SMALLPOX

To the Editor, THE INDIAN MEDICAL GAZETTE

SIR,—In the letter of 'C. L. B.', Bombay, published on page 359 of your issue of June 1933 under the heading 'Vaccination against Smallpox', it is stated by him:—'I object to the circular drill seemingly approved in the last paragraph of Colonel Stewart's note' and further says:—'In highly skilled hands the drill may possibly be successful, but I submit that it can never be as good as a cutting edge or point'. I do not agree with this view, and would offer below a few remarks on the subject.

There is no doubt that the vaccination operation is a trivial one, but all the same it requires a certain amount of skill and practical experience to have it done as it should be to obtain satisfactory results. It is seen that a considerable number of failures or cases reported as 'unsuccessful' or even 'insusceptible' in the hands of one vaccinator are found to show quite a 'successful take' in the hands of another vaccinator, this, of course, irrespective of the quality or potency of the lymph used. The technique of this little operation varies considerably, not only throughout India but also throughout the world. Each country and even each individual seem to adopt his own method considering that to be the best one. Linear incisions with an ordinary scalpel or other cutting-edge vaccinating lancet are the ones generally adopted in Europe. Dr. Force in America used his drill method, which consists in applying vaccine lymph to a two-millimetre circle of derma exposed by removing the epidermis by means of the rotatory motion of a small drill held perpendicularly to the tightly-drawn skin. On the other hand Leake of the United States Public Health Service has adopted the 'Acupuncture' or multiple puncture method with remarkable success. It is interesting to note that both these methods are officially approved and recommended under the New York Regulations. The 'acupuncture' method however is being now generally recognized as about the best. Canada also officially recommends this method to all its vaccinators. In this Presidency however a method recommended to all public vaccinators is of a circular incision by means of a rotatory lancet devised and manufactured in this institute and supplied to all public vaccinators. It consists of a circular disc four millimetres in diameter provided with five tiny conical-shaped needle points. Four of these are on the periphery of the disc and one very slightly longer than the others in the centre. The other end of the lancet is provided with a tiny scoop for placing a drop of lymph on the area to be vaccinated. Through the drop of lymph applied on the skin, the disc end of the lancet, held perpendicularly, is gently pressed and rotated. This, unlike Force's drill method, results in only breaking the skin in a circular incision of just